



# Construction Mechanic Basic, Volume 1

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Although the words "he," "him," and "his" are used sparingly in this manual to enhance communication, they are not intended to be gender driven nor to affront or discriminate against anyone reading this text.

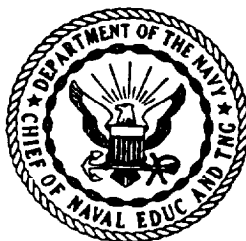
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# CONSTRUCTION MECHANIC BASIC, VOLUME 1

NAVEDTRA 11010



*1998 Edition Prepared by  
CMC(SCW) Charles Lathan*





# PREFACE

*Construction Mechanic Basic*, Volume 1, NAVEDTRA 11010, is a six chapter training manual (TRAMAN). This TRAMAN, along with its companion nonresident training course (NRTC), which is included in this volume, forms a self-study package that will greatly aid students in fulfilling the requirements for advancement.

Designed for individual study, this TRAMAN provides subject matter that relates directly to the occupational standards of the Construction Mechanic rate. There are embedded questions throughout the text, which allows the student to check their understanding of a specific topic. The answers are provided in Appendix II.

The NRTC provides the usual way a student can satisfy the requirements for completing the TRAMAN. The assignments in the NRTC include supporting questions designed to guide the student through the subject matter of the TRAMAN.

This TRAMAN and the NRTC were prepared by the Naval Education and Training Professional Development and Technology Center (NETPDTC), Pensacola, Florida, for the Chief of Naval Education and Training. Technical assistance was provided by the Naval Facilities Engineering Command, Alexandria, Virginia; the Naval Construction Training Center, the Naval Construction Battalion Center, and the Civil Engineering Support Office, Port Hueneme, California; the Naval Construction Training Center, the Naval Construction Battalion Center, and the 20th Naval Construction Regiment, Gulfport, Mississippi.

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# **THE UNITED STATES NAVY**

## **GUARDIAN OF OUR COUNTRY**

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

## **WE SERVE WITH HONOR**

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations as we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

## **THE FUTURE OF THE NAVY**

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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# **SUMMARY OF CONSTRUCTION MECHANIC BASIC**

## **VOLUME 1**

*Construction Mechanic Basic*, Volume 1, NAVEDTRA 11010, consists of chapters on Technical Administration; Principles of an Internal Combustion Engine; Construction of an Internal Combustion Engine; Gasoline Fuel Systems; Fuel Diesel Fuel Systems; and Cooling and Lubricating Systems.

## **VOLUME 2**

*Construction Mechanic Basic*, Volume 2, NAVEDTRA 11011, consists of chapters on Basic Automotive Electricity; Automotive Electrical Circuits and Wiring; Hydraulic and Pneumatics Systems; Automotive Clutches and Transmissions; Drive Lines, Differentials, Axles, and Power Train Accessories; Construction Equipment Power Trains; Brakes; and Automotive Chassis and Body.